November 9, 1998

About the Next Generation Internet (NGI) Initiative

The NGI initiative is a multi-agency Federal research and development (R&D) program that is developing advanced networking technologies, developing revolutionary applications that require advanced networking, and demonstrating these capabilities on testbeds that are 100 to 1,000 times faster end-to-end than today's Internet.

The NGI initiative began October 1, 1997, with the following participating agencies:

DARPA	Defense Advanced Research Projects Agency
DoE	Department of Energy (beginning in FY 1999)
NASA	National Aeronautics and Space Administration
NIH	National Institutes of Health
NIST	National Institute of Standards and Technology
NSF	National Science Foundation

NGI BUDGETS (DOLLARS IN MILLIONS):

Agency	President's FY 1998 Budget	President's Proposed FY 1999 Budget
DARPA	$42	$40
NSF	23	25
DoE		25
NASA	10	10
NIST	5	5
NIH/NLM	5	5
Total	**$85**	**$110**

NGI Goals

(1) Conduct R&D in advanced end-to-end networking technologies

- Reliability
- Robustness
- Security
- Quality of service / differentiation of service (including multicast and video)
- Network management (including allocation and sharing of bandwidth)

(1) Establish and operate two testbeds

- The "100x" testbed will connect at least 100 sites -- universities, Federal research institutions, and other research partners -- at speeds 100 times faster end-to-end than today's Internet.

  This testbed will be built on the following Federal networks:

  - NSF's very high performance Backbone Network Service (vBNS)
  - NASA's Research and Education Network (NREN)
  - DoD's Defense Research and Education Network (DREN)
  - DoE's Energy Sciences network (ESnet) (beginning in FY 1999)

- The "1,000x" testbed will connect about 10 sites with end-to-end performance at least 1,000 times faster than today's Internet. The testbed will be built on DARPA's SuperNet.

- These testbeds will be used for system-scale testing of advanced technologies and services and for developing and testing advanced applications.

(1) Conduct R&D in revolutionary applications

These include enabling applications technologies:

- Collaboration technologies
- Digital libraries
- Distributed computing
- Privacy and security
- Remote operation and simulation

And disciplinary applications:

- Basic science
- Crisis management
- Education
- The environment
- Federal information services
- Health care
- Manufacturing

The NGI initiative is managed by individual agency program managers and is coordinated by the Large Scale Networking Working Group of the Subcommittee on Computing, Information, and Communications (CIC) R&D of the White House National Science and Technology Council's Committee on Technology.

For more information, please contact the National Coordination Office for Computing, Information, and Communications at (703) 306-4722 or nco@ccic.gov.

NGI: http://www.ngi.gov/
NCO: http://www.ccic.gov/